** This template is designed to help guide the preparation of a diagnostic test accuracy research question by population intervention comparator outcome study design and timeline (PICOST) to guide a systematic review of a diagnostic test or algorithm. This is the most important step in the design of a systematic review (SR). This template is used for SRs completed by Task Force members or Expert Systematic Reviewer or Knowledge Synthesis Unit.

**Task Force based Systematic or Scoping Review or Evidence Update**: The PICOST is to be prepared by the Task Force team lead with the oversight of the Task Force Scientific Advisory Committee (SAC) representative(s), approved by the Task Force and then forwarded to SAC chair for acknowledgement. This acknowledgement determines the **time zero or start of the Systematic or Scoping Review workflow schedule. Evidence Updates must be completed within 8 weeks of time zero.**

**ESR or KSU Systematic Review**: The PICOST is prepared by the task force, approved by the Scientific Advisory Committee (SAC) rep on the Task Force prior to SAC chair approval. Post SAC chair approval the PICOST may be edited by the ESR or the KSU lead and returned to the SAC chair for re-approval. This final approval determines the **time zero or start of the SR workflow for the ESR or KSU**

The standard tools for grading evidence were designed to deal with questions that relate to interventions rather than diagnostic tests. However, the overall principles used for the grading of evidence for questions of diagnostic accuracy are similar to those used for questions related to an intervention. “Diagnostic tests” include symptoms and signs as well as the more traditional examples (such as imaging or biochemical assays). New “diagnostic tests” can act as a triage instrument (eg. to minimize the use of invasive or expensive tests), can replace current tests (eg. with a less invasive test, or at a lower cost), or can be an add on (to enhance the accuracy of diagnosis beyond current tests). The highest level of evidence for the use of diagnostic test, is however where the use of the test is causally linked to improved patient outcome presumably through altered management: diagnostic intervention studies. For all proposed diagnostic questions, task forces should first attempt to identify any diagnostic intervention studies (randomised or observational) with direct assessment of patient-important outcomes. If such studies are identified, these would be dealt with by using the standard ILCOR PICOST template.

Unfortunately these sorts of outcome studies are very rare, so the majority of the literature identified will only deal with the diagnostic accuracy of the test: these would be dealt with by using a diagnostic test accuracy PICOST.

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| PICOST Short Title *(edit)* | **PICOST for (insert short name of PICOST e.g. Criteria to diagnose Cardiac Arrest in Dispatch Centre)** |

1. Research Question based on PICOST   
   **(Population, Intervention, Control, Outcomes, Study design and Timeframe)**

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| **PICOST** | **Description** *(with recommended text)* |
| **Population** | Adults and children in any setting (in-hospital or out-of-hospital) with (cardiac arrest) and …….. |
| **Intervention**  **(New criteria of an existing test or testing algorithm or new diagnostic test or testing algorithm)** |  |
| **Comparison**  **“Gold standard” or “reference standard”** |  |
| **Outcomes** | Any diagnostic test outcome. *(preset text)* |
| **Study Design** | **Evidence Updates and Systematic Reviews**  Cross sectional or cohort studies are eligible for inclusion. Unpublished studies (e.g., conference abstracts, trial protocols) are excluded.  All relevant publications in any language are included as long as there is an English abstract *(preset text)*  **Evidence Updates only**  Published systematic reviews and guidelines are included.  All relevant publications in any language are included as long as there is an English abstract *(preset text)*  **Scoping Reviews only**  Randomized controlled trials (RCTs) and non-randomized studies (non-randomized controlled trials, interrupted time series, controlled before-and-after studies, cohort studies) are eligible for inclusion.  Grey literature and social media and non-peer reviewed studies, unpublished studies, conference abstracts and trial protocols are eligible for inclusion.  All relevant publications in any language are included as long as there is an English abstract *(preset text)* |
| **Timeframe** | ***Default is a***ll years *(preset text)* |

1. Review Team

* **This PICOST will involve only one Task Force**

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| **Role** | **Name** | **Notes** |
| \*Lead Task Force Content Experts (1/2): | TF assigned | (preferably TF members\*) |
| \*Lead Task Force Content Experts (2/2): | TF assigned | (preferably TF members\*) |
| \*Lead Task Force Content Expert Mentee (1) | TF assigned | (**ESR assigned PICOST only**, preferably TF members\*) |
| \*TF Reviewer as the lead | TF assigned | (preferably TF members\*) |
| ^KSU or ESR | SAC assigned | (assigned by SAC) |
| ^ESR Mentee (1) | SAC assigned | (assigned by SAC from roster **ESR assigned PICOST only**) |
| ^Domain Lead (1): | SAC assigned | (assigned by SAC) |
| ^SAC representative (1) | SAC assigned | (assigned by TF chair for TF review)  (assigned by SAC for ESR or KSU) |

**Nodal TF PICOST**

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| **Role** | **Name** | **Notes** |
| \*Lead Task Force Content Experts (1/2): | TF assigned | (preferably TF members\*) |
| \*Lead Task Force Content Experts (2/2): | TF assigned | (preferably TF members\*) |
| \*Lead Task Force Content Expert Mentee (1) | TF assigned | (**ESR assigned PICOST only**, preferably TF members\*) |
| \*Nodal TF Content Expert(s) | TF assigned | (when more than one TF involved, 1 per nodal TF): (preferably TF members\*) |
| \*TF Reviewer as the lead | TF assigned | (preferably TF members\*) |
| ^KSU or ESR (1) | SAC assigned | (assigned by SAC) |
| ^ESR Mentee (1) | SAC assigned | (assigned by SAC from roster, **ESR assigned PICOST only**) |
| ^SAC WG representative (1) | SAC assigned | (assigned by TF chair for TF review)  (assigned by SAC for ESR or KSU) |

**Back up Content Experts (Optional)**

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| **Role** | **Name** | **Notes** |
| \*Back up PICOST content expert | Optional | (preferably TF members\*) |
| \*Back up content expert (Nodal TF) | Optional | (preferably TF members\*) |

Back Up Content Expert recommended for Lead and Nodal task forces but not mandated

Back up Content Experts (1 per TF): (content experts who step in if a content expert becomes unable to complete the work. They are not on the team, nor eligible for authorship unless they are asked by TF chair to step into the role)

**\*All Task Force team members (including non-TF members) are expected to have completed the generic AHA COI documentation.**

**TF chair or delegate will confirm COI through topic specific disclosures prior to assignment.**

**ILCOR COI Policy and the COI Committee are resources to address any questions.**

* **TF Chair attestation: I have checked for fiscal and intellectual conflict of interests and found none**

**OR**

* **I have checked for fiscal and intellectual conflict of interests; Author XXX (eg-has published study on Y and is excluded from study selection and bias assessment and xxxxxxxx**

**^ SAC chair or delegate will confirm COI through up to date disclosures prior to accepting assignment.**

1. Pre-existing PICOs Related to scope of work for this PICOST**:**

*Insert all PICOs as worded on the master document and include AHA number*

*Please add the categorization and prioritization ranking by lead TF and nodal TF of the PICOs listed above*

*(note: This information is available in the file: ILCOR PICO List on ilcor.org).*

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1. Definitions: *(This should include definitions of all the relevant terms identified in the PICOST and in the body of literature related to this topic identified during task force discussion)*

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1. Background and Rational for this PICOST**: This section feeds directly into the introduction of the manuscript (Systematic or Scoping Review) or speaks to the importance of the scope of work (Evidence Update)** *(Why is this review important to complete now and what are the potential clinical implications of completing this review? Include how this new science is anticipated to impact on the existing ILCOR recommendations. References required as per ILCOR format embedded in text (last name first author, year of publication, first page number and list full references at bottom of form).*

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1. Notes: *(the nuances and subtleties of the task force discussion; it is important to include anything that doesn’t fit in any other PICOST section but the task force feels this information is contributory to the question)* If it is anticipated by the TaskFforce that there will be insufficient direct evidence, and indirect evidence will be used to answer the question the Task Force needs to document clearly what they mean by indirect and confirm indirect evidence exists.

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1. Task Force Suggested Outcomes**:** *(Usual outcomes for assessment of Diagnostic Test Accuracy relate to whether the target condition is present or not: True positives, True negatives, False positives, False negatives. Other outcomes to consider include: Inconclusive results, Complications, and Cost). These will be updated/modified after the search is performed and the total number of* ***critical or important outcomes should be no more than 7****)*

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1. Key recent studies**:** (*sentinel papers that are appropriate to answer this PICO***.** *Please insert full references)*

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1. Recent systematic reviews**:** *(directly or indirectly addressing this PICOST. Please insert full references)*

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1. Review for ongoing clinical trials or unpublished work *(Use recommend links below)***:**
2. International Clinical Trials Registry Platform ([www.who.int/ictrp/en/](http://www.who.int/ictrp/en/))
3. US clinical trials registry ([www.clinicaltrials.gov](http://www.clinicaltrials.gov))
4. Cochrane CENTRAL (<http://www.cochranelibrary.com/about/central-landing-page.html>)

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| *Please insert ongoing clinical trials or completed trials that are unpublished as identified by the TF members through personal and through web sources.* |

1. List *A priori* Subgroup analyses**: *(applies to systematic reviews only*** *and defined a priori based on expert opinion. Note: number of comparator tables in systematic review = no. of outcomes x no. of comparison x no. of subgroup, consider focusing* ***absolute essential subgroups only****.* *If paediatrics or neonatal TF are involved a neonatal and/or a paediatrics specific subgroup analysis is required*).

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1. Is there an existing detailed prior search strategy developed by an Information Specialist?

Yes  or No

If yes, what year and give reference to the published search strategy or if not published attach the prior search strategy to this PICOST. It is expected that all languages be included, as long as there is an English abstract to enable screening.

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1. **If no prior search, suggested specific search terms/keywords**

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1. Anticipated Workload*(required to guide volume of work estimate for ESR/KSU allocation only):*

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| Approximate number of abstracts to screen based on published SRs or prior ILCOR work | **N=** |
| Approximate number of full manuscripts to review based on published SRs or prior ILCOR work | **N=** |

1. Target Peer Reviewed Journals for SR Publication **(rank by priority if more than one and this applies only to systematic and scoping reviews)**

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| 1. First choice journal |  |
| 1. Second choice |  |
| 1. Third choice |  |

1. References(list references cited by author, year, first page in the Background and Rational )

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1. Confirmation of approval steps (completed by SAC)

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| **Steps** | **Insert Date (day/month/year)** |
| **Submission to SAC chair** | Completed by SAC |
| **Approved by SAC (KSU or ESR)** | Completed by SAC |
| **Acknowledged by SAC chair (TF Systematic and Scoping Review and Evidence Update)** | Completed by SAC |